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ANNUAL REPORT

OF

THE MANAGERS

OF THE

UNION CANAL COMPANY OF PENNSYLVANIA,

TO

THE STOCKHOLDERS,

FEBRUARY 4, 1851.

PHILADELPHIA:

JOHN C. CLARK, PRINTER, 68 DOCK STREET.

1851.

At the Annual Meeting of the Stockholders of the Union Canal Company of Pennsylvania, held at their Office in Carpenter's Court, February 4th, 1851, the following Report was presented, read, and accepted, and is now printed in compliance with the provisions of the Charter.

On the same day the following gentlemen were elected to manage the affairs of the Company for the ensuing year:—

PRESIDENT.

ROBERT B. DAVIDSON.

MANAGERS.

HENRY BOHLEN.	WILLIAM R. WHITE,
HERMAN COPE,	JOSEPH JEANES,
P. F. FONTANGES,	JAMES MAGEE,
WILLIAM RIEHLE, JR.	SETH CRAIGE,
DAVID LAPSLEY,	R. RUNDLE SMITH,
EDMUND G. DUTILH,	JOHN HOLMES.

TREASURER AND SECRETARY.

OSCAR THOMPSON.

REPORT.

THE Managers, in presenting a statement of the business for the past year, have to record events of very unusual character.

The navigation was opened early in March, and the business was active until July, when it was suspended on the whole line in consequence of injuries sustained by the flood of 18th and 19th of that month. The repairs were made as rapidly as possible, and had hardly been completed throughout, and business resumed, when a more disastrous flood occurred, on the 2d of September, by which the Canal sustained more injury than by any former flood. On the Branch Canal and Western Division the damage was small; but on the eastern end, the Canal, for some miles, was nearly obliterated; while bridges, aqueducts and lock-houses were carried away. This, together with the suspension of navigation on the Schuylkill and State Canals, diminished our trade very seriously until the month of November.

The amount of tolls for the year, less drawbacks, were \$76,269.10. Tonnage, 128,438 tons. While most of the articles transported have diminished in quantity, bituminous coal, flour, limestone and cord wood have increased. In addition to the loss of trade, in consequence of the floods, the repairs have cost the Company upwards of \$30,000.

The reservoir, which was in progress at the time of the last meeting, was so far completed at the time of the July flood as to sustain but trifling injury. The water rose, at that time, so rapidly and to such a height, that it has been deemed prudent to add several feet to the height of the dam.

From July to the present time the reservoir has been full, or nearly full, notwithstanding the discharge pipes having been kept open all the time. The difficulty in procuring some small pieces of land that were required, and the right of way for a new road in place of one destroyed by the reservoir, have subjected the Company to more expense and delay in the completion of this work than was anticipated; while the capacity of the reservoir has been much increased beyond what was first contemplated, by raising the dam 6 feet higher, to 36 feet instead of 30 feet depth of water. But little work now remains to be done. Besides supplying a large additional quantity of water, this reservoir is a great security to the works below during high floods, as has been proven the past season.

At the last annual meeting the subject of enlarging the Canal having been brought up, a special meeting of Stockholders was called February 26, "to consider the expediency of enlarging the Canal from Pine Grove to the Susquehanna." At that meeting the following resolution was passed, viz:

Resolved, That the Managers of the Union Canal Company be, and they are hereby authorized to take such measures as may be necessary to procure the requisite means for enlarging the Canal, from Pine Grove to the Susquehanna, to the size of the Pennsylvania Canals, either by an enlargement of the capital stock of the Company or in such other manner as they may deem expedient: *Provided*, that the amount thereof does not exceed the sum of \$300,000, and at a rate of interest not exceeding eight per cent. per annum.

In pursuance of the foregoing resolution, the Managers

Resolved, That the capital stock of the Company be increased by the creation of 6000 shares of new stock, of the par value of \$50 per share, which new stock shall have a preference over the residue of the capital stock, and the holders thereof shall be entitled to receive a dividend of 8 per cent. per annum on the same, payable semi-annually, out of the receipts of the Company, after the expenses of the Canal and

Rail Road, and the necessary expenses of the Company have been fully paid.

Books were opened for subscription to the stock thus created, and after 3000 shares had been subscribed, an instalment of five dollars per share was called in, in April last. An Engineer was appointed to direct the work, and proposals were received for its construction.

Early in the summer the iron was procured for laying a second track on the Rail Road, and delivered at Pine Grove, before the flood of July.

Contracts were made for taking down and rebuilding the locks, so as to have the work completed by the 10th of May; but, owing to the interruption of the navigation by high water and the loss of materials, procured for the locks, the contractors were not able to get all the materials on the ground until the close of the navigation. The Canal was kept open to the end of the season to accommodate them, and the materials are now provided for prosecuting the work, as soon as the weather will permit.

The Board have deviated from their original intention, in making the enlargement, by substituting stone locks, built with cement, for wooden ones. This was thought for the interest of the Company, after careful examination and calculation of cost.

It is intended that all the work done shall be of a substantial character, and suited to any further im-

provement that may be made in the Canal at a future day. The time of completing the enlargement must depend, in some measure, upon the weather; but the main line will probably be opened in June, and the branch line by August next.

The Board authorized the sale of but \$200,000 of the preferred stock; calculating that the surplus income from the Canal, in addition to this sum, would be sufficient to complete the enlargement. The change of plan, from wooden to stone locks, on the Branch Canal, and the more perfect character of the work to be done, has increased the cost considerably; while the floods of last season, by the actual damage done, and diminution of trade, reduced the available resources of the Company at least \$40,000. To make up this deficiency, and improve the line as much as possible, the Board propose to receive subscriptions for the remainder of the preferred stock, authorized by the Stockholders, amounting to \$100,000.

For more particular information, respecting the enlargement of the Canal, and of the receipts and expenditures for the past year, the Stockholders are referred to the Report of the Engineer, and the accounts and tables of the Treasurer, herewith presented.

By order of the Board.

ROBERT B. DAVIDSON,

President.

ENGINEER'S REPORT.

ENGINEER'S OFFICE, UNION CANAL.

Hummelstown, Jan. 31, 1851.

SIR,—I respectfully, at your request, submit the following Report of the state of the enlargement of that portion of the Union Canal which was placed under my charge in June last.

Shortly after I assumed my duties the locks from Portsmouth to Pine Grove were given in contract to various parties, deemed to be experienced and able to complete them. It was agreed, in the contracts, that the works should be finished by the 10th day of May, 1851; and, had an ordinary season followed, there is little doubt but this condition could have been fulfilled. But the devastating freshets of last summer—the first occurring on the 19th of July, which closed navigation on this portion of the Canal for about four weeks—the second taking place on the 2d of September, again interrupting navigation in the Canal for a period of nearly three weeks, placed the completion, by the day first contemplated, beyond ordinary probability.

I hardly deem it necessary to detail in what particulars these floods interfered to such extent with our operations. They, and their effects, are a part of the history of this region, and must be fresh in the minds of all persons living in it.

The work of delivering materials was carried on during the intervals of the floods, and as long as the Canal could be kept open since that time; and I am happy to say there is no reason to apprehend the completion of the main line of the Canal from Portsmouth to the water works being delayed beyond the 1st of July, 1851; and the branch-line from the water works to Pine Grove will, most likely, be done in all the month of August following; so that it is reasonable to expect returns upon the expenditures made in the prosecution of your enterprise during more than the last third portion of the approaching season of navigation.

It having been contemplated to build the important works of

the enlargement in a permanent manner, a plan has been adopted for the locks, as cheap as possible, consistent with solidity, strength and durability. They are to be built of rubble masonry, cemented together by the best hydraulic mortar. A supply of the cement necessary for the mortar was an important *desideratum* at the commencement of the work: the difficulty of procuring which, at proper times, and in sufficient quantities, has often proved a vexatious cause of delay in similar constructions. Your Company has been successful in making purchases of this article at a low price, and in having it stored ready for use wherever required upon the line, in such amounts as leaves nothing to be feared on this score.

The timber required for all the structures is mostly upon the ground; and the stone, although somewhat delayed in its delivery by the occurrence of the floods before alluded to, is entirely within reach, and even, should the Canal not be used for delivering it at the points where it is wanted, the stone can be brought by land in ample time to finish the work within the period proposed.

It is with satisfaction I report the quality of our materials delivered as being very good; the stone, in particular, is superior to what was expected to be found, in size, natural shape and texture.

In the rough estimate which I made at the request of your directors, soon after I took charge of the work, I assumed the sum of \$258,737, as being sufficient to construct the line from Middletown (or Portsmouth) to Pine Grove, including the reconstruction of the rail road, of four miles, from Pine Grove to the coal region. In this estimate only \$25,000 was appropriated to widening the trunk of the Canal, it having been hoped, at that time, that the widening might be made to answer in unconnected pieces; in which case the portions widened would serve as turning-out places for the boats, thus enabling them to pass each other.

Reflection upon this subject, and opinions which I have been enabled to gather from experienced boatmen and forwarders, have convinced me that the system of turn-outs cannot be advantageously adopted to much extent; and I therefore consider

it indispensable to appropriate a larger amount of money towards the widening.

It is not necessary to go into figures deeply to convince any one that five hundred dollars a mile is a small sum to be devoted to enlarging your work to the size of the Pennsylvania Canal; and it is plain that £25,000 would only divide in that proportion upon the fifty miles of canal to be enlarged.

The sums appropriated for bridges and aqueducts, in the first estimate, were also considerably lower in amount than actual investigation and measurement prove to be necessary.

There is a very deep interest felt throughout the extensive region, whose thoroughfare for freight is the Pennsylvania Canal, and whose market is Philadelphia, in the improvement now before you. I do not know any work in this State which has been, or is now, regarded with a warmer feeling of kindness and good wishes for its speedy completion than yours. This is not surprising. The Lebanon valley, through which the Canal passes, as fertile a region, for its extent, as, perhaps, any in the United States, is becoming, as population increases, more fruitful in productions to be disposed of in our great marts every season. And the inhabitants of the country beyond, drained by the Pennsylvania State works, naturally feel a strong anxiety for a homogeneous line of canal to Philadelphia—a line uninterrupted by rail roads or by semi-marine navigation, as the present communications are. It is important that your Company should make its first step a good one; tending to perpetuate, after the work shall have been done, that confidence which is already beginning to be felt.

A few thousand dollars, judiciously expended, to effect this object, must prove of the utmost importance: whilst confining your expenditures within the proper cost of a good and efficient work may produce a *want* of that confidence otherwise so easily attained, and on which ultimate success so much depends.

From the accompanying tabular statements made, calculating upon a *thorough enlargement of the work*, from Portsmouth to Pine Grove, the following summary of the cost of *such enlargement* may be elicited, with some slight variations, as I here adopt round numbers.

Cost of Enlargement—Hummelstown Division.

From Portsmouth to the third of the three Locks at the water works, counting west—

For Locks,	-	-	\$65,003
„ Aqueducts,	-	-	19,090
„ Cement,	-	-	15,000
„ Widening,	-	-	40,000
„ Repairing Bridges,	-	-	5,000
„ Contingencies,	-	-	5,907
			————— \$150,000

For the Pine Grove division, extending from (and including) the three Locks at the water works, to Pine Grove, and for reconstructing the rail road—

For Locks,	-	-	\$114,132
„ Aqueducts,	-	-	9,063
„ Bridges,	-	-	4,705
„ Widening,	-	-	37,600
„ Rail road,	-	-	31,000
„ Cement,	-	-	17,000
„ Contingencies,	-	-	5,000
			————— 218,500
			————— \$368,500

This amount may be reduced to three hundred thousand dollars by leaving off works *ultimately necessary*, but not, perhaps, indispensable at the present moment.

There is, however, no better time than the present for the entire enlargement; and if funds can be procured I consider it in every light the best interest of the Company to go on, not only with the present work in hand, but with the whole enlargement to Reading.

I am, very respectfully,

Your obedient servant,

JAMES WORRALL,

Chief Engineer.

R. B. DAVIDSON, Esq.,

President Union Canal Co., Philada.

Canal Company, from January 1, 1850, to January 1, 1851.

Paid dividend on stock. - - - - -		\$26,867 98
Paid expenses for repairs, &c., on the main line of the Canal from Reading to Portsmouth, - - - - -	\$10,981 40	
Paid expenses for repairs, &c., on the Branch Canal, from Pine Grove to the junction with the main line, - -	2,380 08	
Paid expenses for repairs, &c., on the rail road, - - - - -	1,342 86	
Paid expenses for attending repairs, &c., to the three engines, - - - -	3,460 52	
Paid attending repairs, &c., to the water wheels, - - - - -	975 26	
Paid for use of water for pond engine, and for coal for the three engines (2394 tons coal now on hand valued at cost, \$6224.40.) - - - - -	12,255 76	
Paid collectors', superintendents' and lock keepers' salaries, - - - - -	11,758 49	
Paid officers' salaries at Philadelphia, - -	2,950 00	
Paid resident engineer's salary, - - -	1,200 00	
Paid current expenses at Philadelphia and Lebanon, damages, &c. - - - -	1,320 95	
Paid State and other taxes, - - - -	1,002 18	
Paid drawbacks on coal shipments and refunded tolls, - - - - -	140 60	
Paid discount on uncurrent funds, &c. - -	25 50	
		49,793 60
Paid extraordinary repairs caused by July freshet, - - - - -	9,808 49	
Do. do. September do. - - - - -	20,311 02	
		30,119 51
Paid for constructing new feeder to pond engine, - - - - -	501 53	
Paid contractors, balance in full for constructing new reservoir, - - - -	13,340 71	
Paid contractors on account, for constructing new road along the reservoir. -	2,618 40	
Paid for land required for reservoir and road, damages, &c. - - - - -	4,327 50	
Paid for cutting and sawing lumber from new reservoir (122,346 feet lumber on hand valued at \$1382.95), - - -	3,262 93	
Paid superintendent's salary, &c. - - -	494 04	
		24,545 11
Balance cash on hand, - - - - -		210 78
		<u>\$131,536 98</u>

*Comparative Statement of the Business of the Union Canal, from
its opening to the present time.*

Years	Tons.	Tolls received.	Average rate per ton. Cts. Mills.
1828	18,124	\$15,512	85 5
1829	20,522	16,676	81 3
1830	41,094	35,133	85 5
1831	59,970	59,137	98 6
1832	47,645	59,061	1 23 9
1833	85,876	103,462	1 20 5
1834	84,536	119,870	1 41 8
1835	118,978	135,254	1 13 7
1836	117,136	133,025	1 13 6
1837	110,032	107,590	97 8
1838	126,870	123,575	97 4
1839	138,568	135,163	97 5
1840	115,292	110,855	96 1
1841	83,624	66,601	79 7
1842	83,106	57,477	69 2
1843	76,959	53,538	68 2
1844	79,871	56,580	70 8
1845	102,593	60,036	58 5
1846	114,920	62,682	54 5
1847	139,256	91,356	65 6
1848*	153,222	95,953	62 6
1849	148,332	86,800	58 5
1850	128,438	76,269	59 4

The Pine Grove Coal Trade.

Years.	Tons.	Years.	Tons.	Years.	Tons.
1833	3,500	1839	20,885	1845	35,000
1834	6,911	1840	20,500	1846	55,500
1835	14,000	1841	19,500	1847	60,499
1836	12,000	1842	32,500	1848*	64,686
1837	17,000	1843	22,000	1849	72,156
1838	15,000	1844	29,000	1850	62,866

* From Nov. 1st, 1847, to Jan. 1st, 1849, 14 months.

*Statement of the Tonnage which passed the Union Canal from
January, 1850, to January, 1851.*

						Tons.
Anthracite coal,	-	-	-	-	-	65,181
Bituminous coal,	-	-	-	-	-	3,599
Charcoal,	-	-	-	-	-	239
Flour, 22,800 barrels,	-	-	-	-	-	2,137
Grain, 210,938 bushels,	-	-	-	-	-	5,273
Iron,	-	-	-	-	-	10,613
Iron ore,	-	-	-	-	-	6,095
Limestone,	-	-	-	-	-	6,427
Lumber, 17,913,866 feet,	-	-	-	-	-	17,994
Shingles, 6,015,275,	-	-	-	-	-	2,672
Plaster,	-	-	-	-	-	342
Lime, 33,485 bushels,	-	-	-	-	-	1,196
Cord wood, 2008 cords,	-	-	-	-	-	2,690
Salt, 14,354 bushels,	-	-	-	-	-	385
Fish, 785 barrels,	-	-	-	-	-	79
Merchandise,	-	-	-	-	-	280
Whiskey, 426 barrels,	-	-	-	-	-	57
Sundries,	-	-	-	-	-	3,179
						<hr/>
						128,438

